



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

FEB - 4 2009

Reply To: OCE-082

Bob Hayden
Upper Skagit Indian Tribe
5984 North Darrk Lane
Bow, Washington 98232

Re: Upper Skagit Indian Tribe Water Reclamation Facility

Dear Mr. Hayden:

The U.S. Environmental Protection Agency, Region 10 (EPA), Underground Injection Control (UIC) Program is in receipt of an Inventory of Injection Wells and proposal for two Class V injection wells planned for the Upper Skagit Indian Tribe Water Reclamation Facility. Wilson Engineering, LLC, provided these materials to EPA on October 7, 2008 and December 8, 2008. EPA has reviewed the information and is providing comments for your consideration. Once EPA receives a response to the comments set out below, the agency will make a final determination on the proposed injection activity and whether the proposal can be authorized by rule or requires a permit.

Direct Injection into Underground Source of Drinking Water

1. The inventory submittal proposes direct injection of up to 6 million gallons of reclamation plant effluent per month (200,000 gallons per day) into the Vashon Advance Outwash geologic unit. The Vashon Advance Outwash is an underground source of drinking water (USDW) that supplies public and residential drinking water. Direct injection into a USDW requires an operator meet all federal primary drinking water standards at the point of injection. See 40 C.F.R. §§ 144.12(a) and 144.82. Your proposal only addresses the design standards for biological oxygen demand, total suspended solids, turbidity, total coliform, and total nitrogen in the wastewater effluent to be injected. The injectate must meet all primary drinking water standards.
2. The Vashon Advance Outwash aquifer is reported to be unconfined. The proposed injection well design specifies that the base of the injection wells will be located 140 feet below ground surface to allow for a 20-foot separation distance between the points of discharge at the base of the injection wells and the top of the saturated zone at approximately 160 feet below ground surface. However, the well logs provided for monitoring wells 2A and 2B (the wells located closest to the proposed injection wells) show that ground water was detected at 45 feet below ground surface in both wells when the wells were drilled. In addition, the well logs document that the Vashon Glacial Till (the formation overlying the Vashon Advance Outwash) and Vashon Glacial Outwash units are moist to wet in monitoring wells 2A and 2B. Ground water was not measured in wells 2A and 2B during monitoring events in June – September 2008, but monitoring data collected at other times of the year or in conjunction with storm events are not included in the inventory submittal. Saturated conditions within the geologic units or

possible fluctuations of the water table may impact the operation of the proposed injection wells and could have an impact on the design-specified 20-foot separation distance.

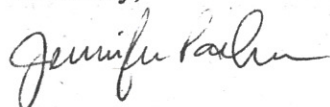
3. Four monitoring wells were installed during the site investigation and design phase of this project. If injection occurs at this site, additional monitoring wells would be necessary to evaluate potential impacts to the USDW from the injection operations. At other reclamation plants of similar design, at least one monitoring well is installed in an up-gradient direction, to establish background water quality, and a line of monitoring wells are typically installed down-gradient from the injection point at locations where they are most likely to intercept the injected effluent.
4. If injection occurs at this site, a quality assurance plan for sampling and analysis should be established. The sampling and analysis plan should be designed to evaluate whether injection activities introduce contaminants into the USDW.

Reclamation Plant Design and Operation

5. The design plan for the proposed reclamation plant does not account for effluent storage during monitoring verification to ensure the injectate meets all primary drinking water standards prior to injection.
6. The proposal suggests that you will receive waste from third-party facilities not affiliated with the Upper Skagit Indian Tribe. The Upper Skagit Indian Tribe will be responsible for maintaining records of written manifests documenting the nature and composition of all wastes received for disposal, including statements documenting that the waste is exempt from regulation as hazardous waste under 40 C.F.R. § 261.4.
7. In the event of system failure, the proposal calls for storage of 200,000 gallons of effluent in an equalization basin, with any additional effluent directed to the Burlington wastewater treatment facility. The proposal also explains that the existing sewer main that would convey effluent to the Burlington wastewater treatment plant is insufficient to handle the projected flow. The effluent must be managed appropriately to ensure that any injectate not meeting primary standards is properly managed and not injected.

If you have any questions or would like to schedule a meeting to discuss the items listed above, please contact me at (206) 553-1900.

Sincerely,



Jennifer Parker
Environmental Scientist